

**Caleb Wright**  
Junior Division Engineering  
*Efficient Hydrogen Production*

I came to the conclusion by testing six different designs of electrolysis units with the same amount of saline solution and an equal electric charge. I tested one unit with two aluminum rods, one with four, and one with eight aluminum rods, as well as three others with two, four, and six aluminum plates. After gathering the data, I found that the results supported my hypothesis that the unit with the most aluminum in contact with the saline solution would create the greatest hydrogen production. This investigation is important because its application could be valuable for future use in designing supplemental hydrogen units in automobiles and other fuel using devices. It helps to quantify the process of electrolysis as well as giving evidence for future experimentation and potentially create a more efficient design of hydrogen unit.